

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: WASH POND	Lake Area (ha):	61.07
Town: HAMPSTEAD	Maximum depth (m):	10.4
County: Rockingham	Mean depth (m):	4.0
River Basin: Merrimack	Volume (m ³):	2432000
Latitude: 42°53'09" N	Relative depth:	1.2
Longitude: 71°10'47" W	Shore configuration:	1.00
Elevation (ft): 228	Areal water load (m/yr):	2.78
Shore length (m): 2600	Flushing rate (yr ⁻¹):	0.70
Watershed area (ha): 362.6	P retention coeff.:	0.76
% watershed ponded: 0.0	Lake type:	natural w/dam

<u>BIOLOGICAL:</u>		22 January 1998	28 July 1997
DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 75%	DINOBRYON 50%
	#2	ASTERIONELLA 25%	MALLOMONAS 20%
	#3		CERATIUM 15%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			5.10
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 35%	NAUPLIUS LARVA 30%
	#2	NAUPLIUS LARVA 33%	VORTICELLA 24%
	#3	CYCLOPOID COPEPOD 13%	KELLICOTTIA 17%
ROTIFERS/LITER		106	131
MICROCRUSTACEA/LITER		104	176
ZOOPLANKTON ABUNDANCE (#/L)		210	404
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			3.3
BOTTOM DISSOLVED OXYGEN (mg/L)		12.5	0.1
BACTERIA (E. coli, #/100 ml)	#1		21
	#2		33
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	6.3
Hypolimnion volume (m ³) :	48000
Anoxic volume (m ³) :	95750

CHEMICAL:Lake: WASH POND
Town: HAMPSTEAD

	22 January 1998		28 July 1997		
DEPTH (m)	3.0	6.0	2.0	6.0	9.0
pH (units)	6.7	7.0	7.1	6.9	7.0
A.N.C. (Alkalinity)	19.3	15.2	11.9	12.7	13.9
NITRATE NITROGEN	< 0.05	< 0.05	0.59		< 0.05
TOTAL KJELDAHL NITROGEN	0.40	0.30	0.50	0.50	0.60
TOTAL PHOSPHORUS	0.010	0.007	0.016	0.011	0.020
CONDUCTIVITY (μ mhos/cm)	216.0	220.5	213.0	204.7	211.5
APPARENT COLOR (cpu)	8	7	8	10	12
MAGNESIUM			2.36		
CALCIUM			9.0		
SODIUM			26.4		
POTASSIUM			1.75		
CHLORIDE	53	54	52		53
SULFATE	7	7	7		7
TN : TP	40	43	68		30
CALCITE SATURATION INDEX			2.2		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1997

D.O. S.D. PLANT CHL TOTAL CLASS

4	2	1	1	8	Meso.
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COMMENTS:

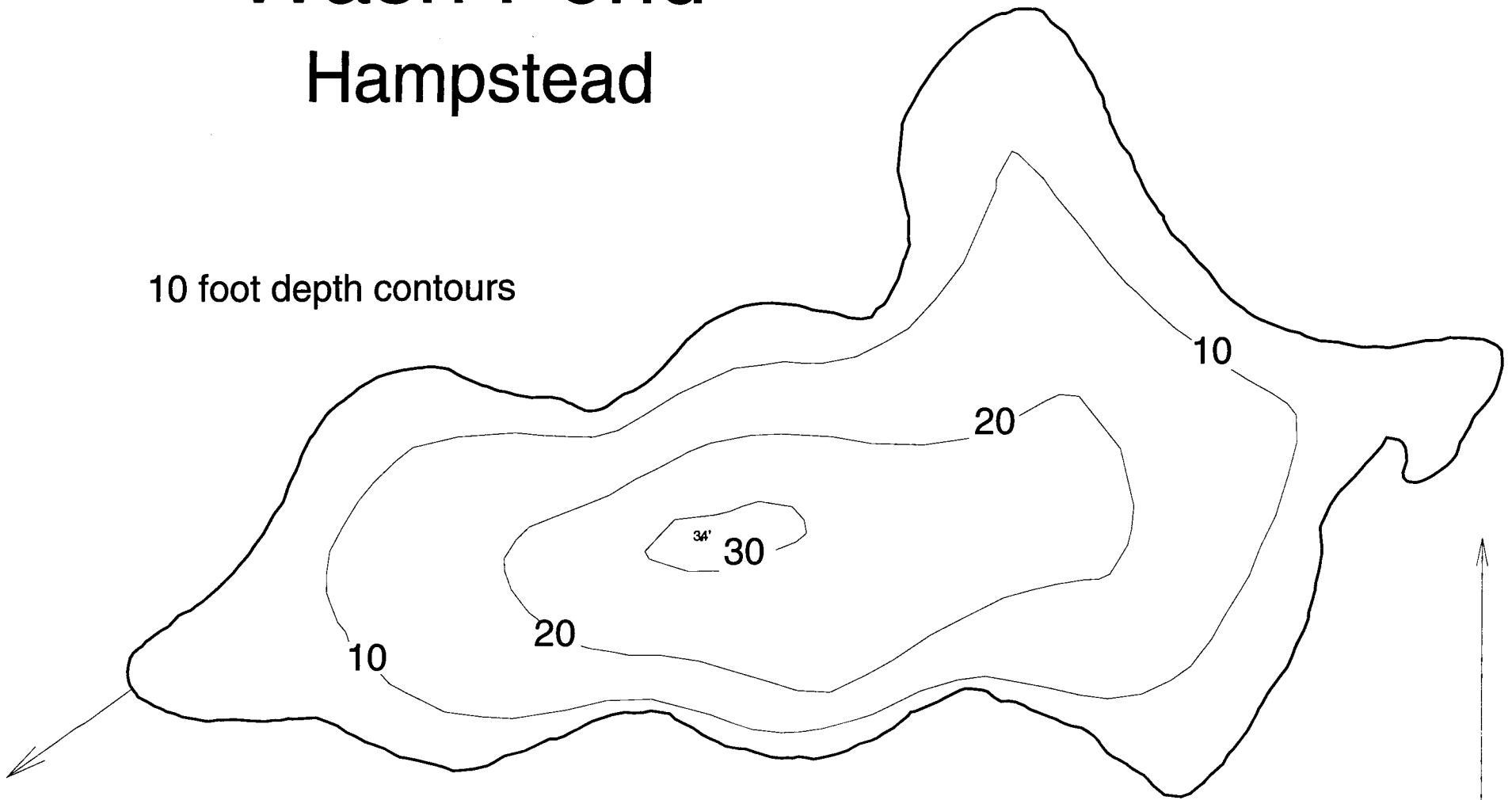
1. AKA Sunset Lake.
2. This pond was previously surveyed and classified in 1976 and in 1984. It was rated mesotrophic with eight trophic points in all three years (including 1997).
3. Elevated conductivity values indicate elevated ion levels, perhaps from stormwater runoff from developed areas. Elevated sodium and chloride ion levels suggest some salt runoff into the pond.
4. This lake had a very developed shoreline and had both a town beach and a campground beach.

Wash Pond

Hampstead

10 foot depth contours

111-240



0 0.5
Km

N

FIELD DATA SHEET

LAKE: WASH POND
DATE: 07/28/97

TOWN: HAMPSTEAD
WEATHER: SUNNY, HUMID & BREEZY

[illegible]

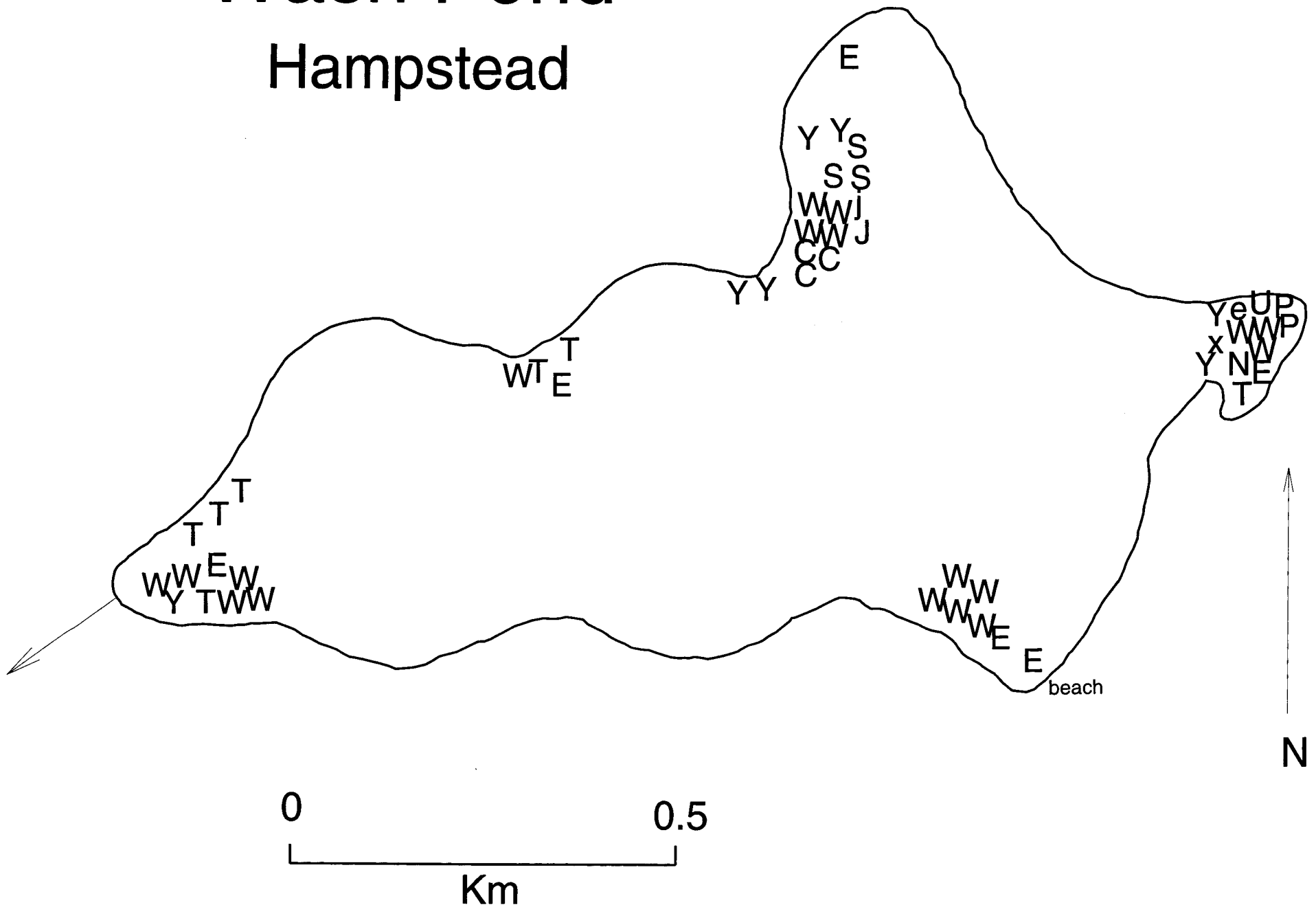
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SECCHI DISK (m): 3.3
BOTTOM DEPTH (m): 9.5
TIME: 1245
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COMMENTS :

*Dissolved oxygen values are in mg/L

Wash Pond

Hampstead



AQUATIC PLANT SURVEY

LAKE: WASH POND

TOWN: HAMPSTEAD

DATE: 07/28/97

[illegible]

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. Plants were very common in the eastern cove, but mostly sparse elsewhere, for an overall rating of scattered. Most of the pondweeds in the eastern cove were submerged types and were not a hindrance to navigation.
2. At least three different species of pondweeds were present but were not differentiated on the map.